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10/020,015	12/14/2001	Francois Pachet	450117-03595	8982
20999	7590	03/01/2005	EXAMINER	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			LEROUX, ETIENNE PIERRE	
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			2161	

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/020,015

Applicant(s)

PACHET, FRANCOIS

Examiner

Etienne P LeRoux

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claims Status***

Claims 1-59 are pending. Claims 1-59 are rejected as detailed below.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 26-28, 54 and 55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 26 and 54 recite “expressing a degree of accepted departure from said at least preponderance of information items falling under said selected attribute, whereby said discovery parameter can be set to a first value in which said preponderance is maximal, possibly total, and to a second value, in which said sequence also contains a certain proportion of information items not falling under said selected attribute. The metes and bounds of the claim cannot be ascertained due to inclusion of language such as “expressing a degree of acceptance.” Furthermore, it is unclear what applicant is claiming for the discovery parameter because it can be set to “a first value which said preponderance is maximal, possibly total, and to a second value, in which said sequence also contains a certain proportion of information items not falling under said selected attribute.”

Claims 27, 28 and 55 are rejected for being dependent on a rejected base claim.

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***Art Rejection Precluded***

Claims 26-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The indefiniteness of claims 26-28 precludes art rejection.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14, 20, 21, 25, 30-43, 48, 49, 53 and 57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat No 6,088,455 issued to Logan et al (hereafter Logan) in view of US Pat No 6,675,174 issued to Bolle et al (hereafter Bolle).

Claims 1 and 33:

Logan discloses apparatus for storing at least one sequence of information, said information being formed of a succession of information items in which an artistic or rational link is considered to exist between at least some pairs of adjacent items in said succession, comprising:

- input means [Fig 1, 12] for receiving said sequence of information,
- storage means [Fig 2, 52] for storing said information; characterized in that it further comprises

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- segmentation means for segmenting said sequence of information into individually accessible segments each corresponding to a respective information item, in response to segmentation data indicating end limits of said information items; said storage means being accessible to output said segments in a sequence corresponding to said succession of information items [col 9, lines 47-67, col 10, lines 10-20]

Logan discloses the elements of the invention as noted above and furthermore, discloses a comparator 50, Figure 1, which searches the data signal representative of the broadcast programming signal for the occurrence of one or more of known segments by identifying an identification signal stored within the identification signal memory 64, Figure 1, and representative of the known segment (column 8, lines 39- 44). However, Logan does not disclose producing means for automatically producing similarity relations between the segments in terms of mutual closeness in which the segments initially occurred in the received sequence of information. Bolle discloses producing means for automatically producing similarity relations between the segments in terms of mutual closeness in which the segments initially occurred in the received sequence of information [similarity search algorithm 180, Fig 1B, col 10, lines 5-25]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Logan to include producing means for automatically producing similarity relations between the segments in terms of mutual closeness in which the segments initially occurred in the received sequence of information as taught by Bolle for the purpose of performing a recognition phase on the segments of the target media stream [col 9, lines 60-65]. The skilled artisan would have been motivated to modify Logan per the above such that a system can be developed for measuring similarity between a set of known temporal media segments

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(reference streams) and one or more target media streams, or segments of target media streams [col 1, lines 34-38].

Claims 2 and 34:

The combination of Logan and Bolle discloses the elements of claims 1 and 33 as noted above and furthermore, Logan discloses wherein said received sequence of information is in the form of a data stream, said segmentation means being responsive to time information in said segmentation data indicating times of occurrence of said end limits of said information items for cutting up said stream automatically to extract said segments therefrom [col 9, lines 6-25].

Claim 3:

The combination of Logan and Bolle discloses the elements of claim 1 as noted above and furthermore, Logan discloses wherein said segmentation means is adapted to receive segmentation data through a second input separate from said information to be stored [col 7, lines 55-60]

Claims 4 and 35:

The combination of Logan and Bolle discloses the elements of claims 1, 3 and 33 as noted above and furthermore, Logan discloses wherein said segmentations means is adapted to extract said segmentation data from a website associated to a source of said sequence of information [col 7, lines 55-60].

Claims 5 and 36:

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The combination of Logan and Bolle discloses the elements of claims 1 and 33 as noted above and furthermore, Logan discloses wherein said segmentation means is adapted to extract said segmentation data from said sequence of information [Fig 2, 64 and col 8, lines 35-45].

Claims 6 and 37:

The combination of Logan and Bolle discloses the elements of claims 1 and 33 as noted above and furthermore, Logan discloses wherein said input means is adapted to receive said sequence of information in the form audio data, and wherein said segmentation means is operative to form segments each corresponding to a music title in said sequence of information [Fig 1, 12 , col 5, lines 11-43].

Claims 7 and 38:

The combination of Logan and Bolle discloses the elements of claims 1, 6, 33 and 37 as noted above and furthermore, Logan discloses wherein said input means is adapted to receive said audio data from a radio station sending a sequence of music titles in accordance with a music program [Fig 1, 12 , col 5, lines 11-43].

Claim 8:

The combination of Logan and Bolle discloses the elements of claims 1 and 6 as noted above and furthermore, Logan discloses wherein said input means is adapted to receive said audio data from music compilations selected and entered by a user [Fig 1, 16, col 5, line 56 – col 6, line 8].

Claim 9:

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The combination of Logan and Bolle discloses the elements of claims 1, 6 and 8 as noted above and furthermore, Logan discloses wherein said music compilation is in the form of a command to download from a server selected music titles in an order corresponding to a selected succession [col 5, lines 20-30].

Claims 10 and 39:

The combination of Logan and Bolle discloses the elements of claims 1 and 33 as noted above and furthermore, Logan discloses identification means connectable to a source of identification data identifying information items in said sequence of information, said identification means extracting at least some of said identification data to form an identifier, and combining means for combining with a given segment an identifier corresponding thereto, said storage means further being arranged to store said identifier in association with said segment [col 5, line 57 – col 6, line 8].

Claims 11 and 40:

The combination of Logan and Bolle discloses the elements of claims 1, 10, 33 and 39 as noted above and furthermore, Logan discloses wherein said identifier includes data indicative of an attribute under which respective groups of said segments can be generically identified and classed [col 12, lines 1-14].

Claims 12 and 41:

The combination of Logan and Bolle discloses the elements of claims 1, 10, 11, 33, 39 and 40 as noted above and furthermore, Logan discloses wherein said attribute corresponds to at least one type under which a music title can be classed [col 12, lines 1-14]



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Claims 13 and 42:

The combination of Logan and Bolle discloses the elements of claims 1, 10-12, 33 and 39-41 as noted above and furthermore, Logan discloses wherein said identifier includes artist data indicative of an artist associated with the corresponding music title, and said apparatus further comprises means for deriving at least one said type on the basis of said artist data [col 12, lines 1-14].

Claims 14 and 43:

The combination of Logan and Bolle discloses the elements of claims 1 and 33 as noted above and furthermore, Logan discloses further comprising similarity analyzing means for producing automatically similarity relations between stored segments in terms of their closeness in said sequence of stored segments [Fig 4, col 12, lines 35-42].

Claims 20 and 48:

The combination of Logan and Bolle discloses the elements of claims 1 and 33 as noted above and furthermore, Logan discloses wherein said apparatus further comprises music program generating means for building a sequence of information items from said stored segments [col 2, lines 24-38].

Claims 21 and 49:

The combination of Logan and Bolle discloses the elements of claims 1, 20 33 and 48 as noted above and furthermore, Logan discloses wherein said program generating apparatus is operative to build said sequence of information items in response to user tastes expressed through user inputs [col 2, lines 24-38].

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Claim 25:

The combination of Logan and Bolle discloses the elements of claims 1 and 20 as noted above and furthermore, Bolle discloses wherein said program generating means is responsive to a selected attribute of said information items, said selected attribute being entered through corresponding user input, to create a sequence of information items containing at least a preponderance of information items falling under said selected attribute [segment index table 175, Fig 1B, col 10, lines 5-15].

Claims 30 and 57:

The combination of Logan and Bolle discloses the elements of claims 1, 20 29, 33, 48, 49, and 56 as noted above and furthermore, Logan discloses means for importing said created sequences [col 3, lines 30-42].

Claim 31:

The combination of Logan and Bolle discloses the elements of claims 1, 20 and 29 as noted above and furthermore, Logan discloses playback means for receiving said segments of a selected created sequence and expressing the data contained therein in a form intelligible to a user (e.g. music, images, etc.) [Fig 1, 20].

Claim 32:

The combination of Logan and Bolle discloses the elements of claims 1 and 20 as noted above and furthermore, Logan discloses apparatus for producing at least one taste, said taste

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being a user taste comprised of a sequence of information items produced by taking account feedback from said user, or a generic taste comprised of a sequence [abstract].

Claim 53:

The combination of Logan and Bolle discloses the elements of claims 33, 48 and 49 as noted above and furthermore, Logan discloses wherein said program generating step is carried out to take account of a selected attribute (e.g. type of music) of said information items, said selected attribute being entered through a corresponding user input, to create a sequence of information items containing at least a preponderance of information items falling under said selected attribute [col 12, lines 1-13].

Claims 15-19, 22, 24, 44-47, 50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Logan and Bolle and further in view of US Pat No 6,225,546 issued to Kraft et al (hereafter Kraft).

Claims 15 and 44:

The combination of Logan and Bolle discloses the elements of claims 1, 14, 33 and 43 as noted above but does not disclose wherein said similarity analyzing means produces said similarity relations by producing, for each segment corresponding to an information item considered in a given stored sequence, a similarity relation graph expressing a distance D between that information item and other stored information items. Kraft discloses wherein said similarity analyzing means produces said similarity relations by producing, for each segment corresponding to an information item considered in a given stored sequence, a similarity relation graph expressing a distance D between that information item and other stored information items

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as taught by Kraft [Fig 5]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Logan and Rolle to include wherein said similarity analyzing means produces said similarity relations by producing, for each segment corresponding to an information item considered in a given stored sequence, a similarity relation graph expressing a distance  $D$  between that information item and other stored information items as taught by Kraft. The ordinarily skilled artisan would have been motivated to modify the combination of Logan and Rolle per the above for the purpose of generating a thumbnail of an audio segment so that the audio segment can be recognized [Kraft, col 2, lines 15-25]

Claims 16 and 45:

The combination of Logan, Bolle and Kraft discloses the elements of claims 1, 14, 15, 33, 43 and 44 as noted above and furthermore, Kraft discloses wherein said similarity relation graph contains, for each said other information item, a closeness value determined between pairs formed by said information item considered and said other information item [Fig 5].

Claims 17 and 46:

The combination of Logan and Bolle discloses the elements of claims 1, 14, 33, 43 and 44 as noted above. The combination of Logan and Bolle fails to disclose wherein said analyzing means is arranged to calculate said closeness value for said information item considered by attributing a first closeness value each time said other information item appears just before or just after in said sequence, said first values being cumulated over said sequence to yield a cumulated value indicating the closeness of said pair of information items. Kraft discloses wherein said analyzing means is arranged to calculate said closeness value for said information

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item considered by attributing a first closeness value each time said other information item appears just before or just after in said sequence, said first values being cumulated over said sequence to yield a cumulated value indicating the closeness of said pair of information items [Fig 5]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Logan to include wherein said analyzing means is arranged to calculate said closeness value for said information item considered by attributing a first closeness value each time said other information item appears just before or just after in said sequence, said first values being cumulated over said sequence to yield a cumulated value indicating the closeness of said pair of information items as taught by Kraft. The ordinarily skilled artisan would have been motivated to modify Logan per the above for the purpose of efficiently summarizing a musical composition [Kraft, col 1, line 60 – col 2, line 6].

Claims 18 and 47:

The combination of Logan, Bolle and Kraft discloses the elements of claims 1, 14, 17, 33, 43, 44 and 46 as noted above. The combination of Logan and Kraft fails to disclose wherein said analyzing means is further arranged to attribute a second closeness value, smaller than said first closeness value, each time said other information item is separated from said information considered by m separating information items, where m is an upper bounded number, said first and second values being cumulated over said sequence to yield a cumulated value indicating the closeness said pair of information items. However, Kraft discloses a method of generating audio summaries of musical pieces by means of composite hierarchical structures [abstract, Fig 5]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Logan, Bolle and Kraft to include wherein said analyzing means is

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further arranged to attribute a second closeness value, smaller than said first closeness value, each time said other information item is separated from said information considered by separating information items, where  $m$  is an upper bounded number, said first and second values being cumulated over said sequence to yield a cumulated value indicating the closeness said pair of information items. The ordinarily skilled artisan would have been motivated to modify the combination of Logan, Bolle and Kraft per the above for the purpose of creating a brief summary of the common theme of the composition so that a listener can recognize it [Kraft, col 2, lines 7-11].

Claim 19:

The combination of Logan, Bolle and Kraft discloses the elements of claims 1, 14, 17 and 18 as noted above and furthermore, Kraft discloses wherein said number  $m$  of separating information items is equal to one [Fig. 5].

Claims 22 and 50:

The combination of Logan and Bolle discloses the elements of claims 1, 20, 33, and 48 as noted above, however, the combination of Logan and Bolle fails to disclose wherein said program generating apparatus is operative to build said sequence of information items in response to said similarity relations according to any one of claims 14 to 19, in which information items are concatenated taking their closeness into account. Kraft discloses wherein said program generating apparatus is operative to build said sequence of information items in response to said similarity relations according to any one of claims 14 to 19, in which information items are concatenated taking their closeness into account [Fig. 5]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the

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combination of Logan and Bolle to include wherein said program generating apparatus is operative to build said sequence of information items in response to said similarity relations according to any one of claims 14 to 19, in which information items are concatenated taking their closeness into account as taught by Kraft. The ordinarily skilled artisan would have been motivated to modify the combination of Logan and Bolle per the above for the purpose of creating a summarization hierarchy [Kraft, col 10, lines 20-25]

Claims 24 and 52:

The combination of Logan, Bolle and Kraft discloses the elements of claims 1, 20 and 22 as noted above, and furthermore, Logan discloses wherein said program generating means (48, 50) is further responsive to said similarity relations to create a sequence of information items in which information items close to disliked information items are de-emphasized and/or in which information items close to liked information items are emphasized [col 2, lines 30-38].

Claims 23 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Logan and Bolle in view of US Pat No 6,558,015 issued to Eyer et al (hereafter Eyer).

Claims 23 and 51:

The combination of Bolle and Logan discloses the elements of claims 1, 20, 21, 33, 48 and 49 as noted above, however, the combination of Logan and Bolle fails to disclose wherein said program generating means is responsive to a user input expressing a like or dislike, associated to at least some information items in said succession of information items, to create a sequence of information items in which said disliked information items tend to be removed and

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liked information items are emphasized. Eyer discloses wherein said program generating means is responsive to a user input expressing a like or dislike, associated to at least some information items in said succession of information items, to create a sequence of information items in which said disliked information items tend to be removed and liked information items are emphasized [col 8, lines 32-44]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Logan and Bolle to include wherein said program generating means is responsive to a user input expressing a like or dislike, associated to at least some information items in said succession of information items, to create a sequence of information items in which said disliked information items tend to be removed and liked information items are emphasized as taught by Eyer. The ordinarily skilled artisan would have been motivated to modify the combination of Logan and Bolle per the above for the purpose customizing digital audio received from a radio station [Eyer, col 8, lines 32-44]

Claims 29 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Logan and Bolle in view of US Pat No 6,083,009 issued to Kim et al (hereafter Kim).

Claims 29 and 56:

The combination of Logan and Bolle discloses the elements of claims 1, 20, 33, 48, and 49 as noted above, however, Logan fails to disclose wherein said program generating means comprises means for labeling and storing said created sequences as objects which can be selectively exported outside said apparatus. Kim discloses wherein said program generating means comprises means for labeling and storing said created sequences as objects which can be



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selectively exported outside said apparatus [Fig 4, step 109,col 5, lines 45-62]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Logan and Rolle to include wherein said program generating means comprises means for labeling and storing said created sequences as objects which can be selectively exported outside said apparatus as taught by Kim. The ordinarily skilled artisan would have been motivated to modify the combination of Logan and Rolle per the above for the purpose of making the music list available at a remote site.

### ***Response to Arguments***

Applicant's arguments submitted on 9/13/2004 with respect to claims 1-59 have been considered but are moot in view of the new ground(s) of rejection necessitated by applicant's claim amendment.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Pat No 6,611,268 issued to Szeliski et al discloses an analyzer that computes a measure of similarity between all pairs of frames in the input video sequence.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne LeRoux whose telephone number is (571) 272-4022.

The examiner can normally be reached on Monday – Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (571) 272-4023.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Patent related correspondence can be forwarded via the following FAX number (703) 872-9306

Etienne LeRoux

2/18/2005



SAFET METJAHIC  
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